

SRS NMSS Maintenance Work Process Improvements

**Integrated Safety Management
Workshop
(Feedback and Improvement)**

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December 5, 2000**

SRS NMSS Maintenance

- Vision -

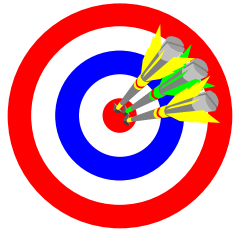
Have a organization in place equipped with the skilled staff, management tools, performance measures, and strong leadership necessary to maintain the NMSS facilities in a manner that implements the ISM Core Functions and Guiding Principles.

Initial Sources for Feedback and Improvement

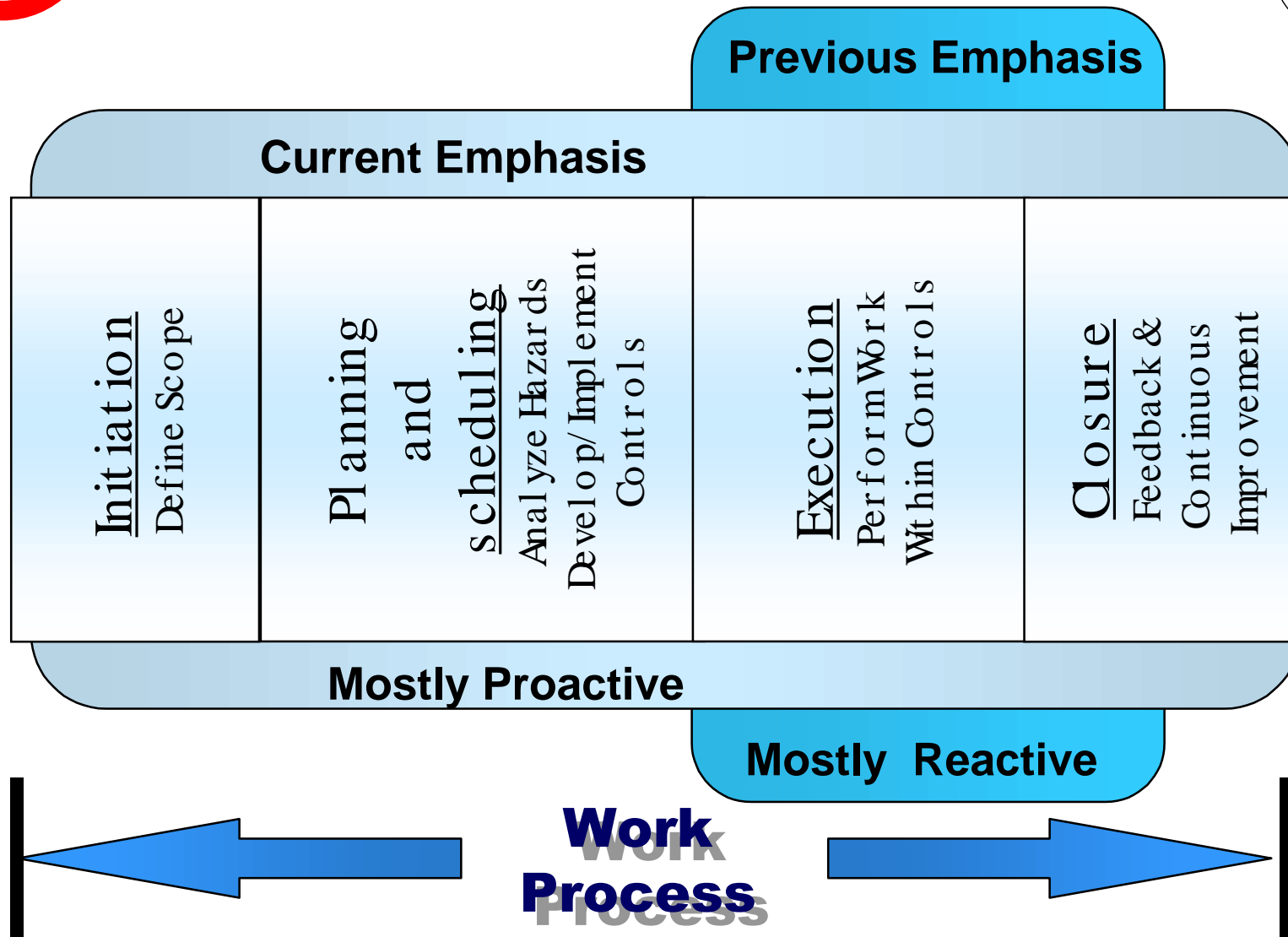
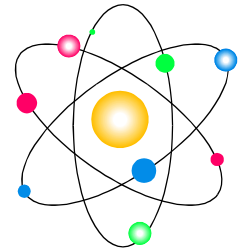
1. Site Maintenance/Operations Reengineering Evaluations
2. Self Assessments/Evaluations
3. Facility Evaluation Board Reviews
4. Lessons Learned Communications
5. Site Subject Matter Expert Evaluations

The Harsh Reality

The NMSS division maintenance work processes were not managed in a consistent and effective manner. Inefficiencies were identified throughout the division maintenance programs. Task readiness was not always evident. Schedules were not consistently managed to help facilitate safe and effective work/resource management.

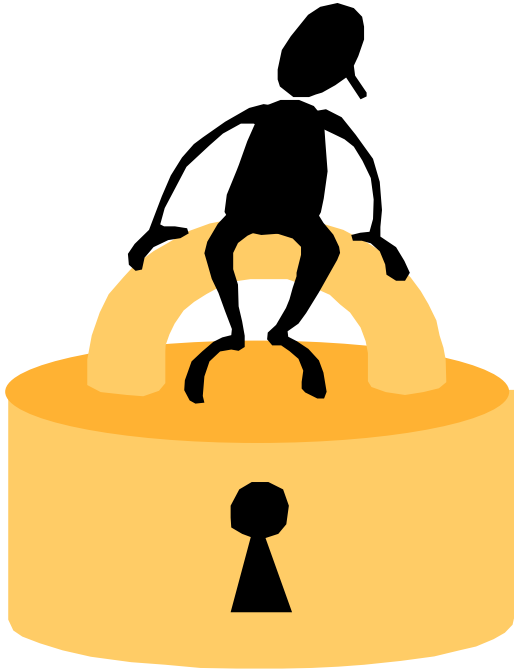


Big Culture Change



NMS&S Work Management

TEAMWORK



IS THE KEY

Work Process Improvement Categories

1. Reduce/Eliminate Inefficiencies & Impedances

- Full/consistent implementation and maturity of a new reengineered Work Management process

2. Resolve Organizational Issues

- Consolidate selected Maintenance organizations and functions
- Control of external Maintenance organizations
- Functional integration
- Strong leadership

3. Improve Communication & Coordination with Operations

- Establish integrated scheduling process
- Personnel assignments / Operations representation
- Facility Manager ownership
- Work process feedback, lessons learned, action items

Work Process Improvement Categories

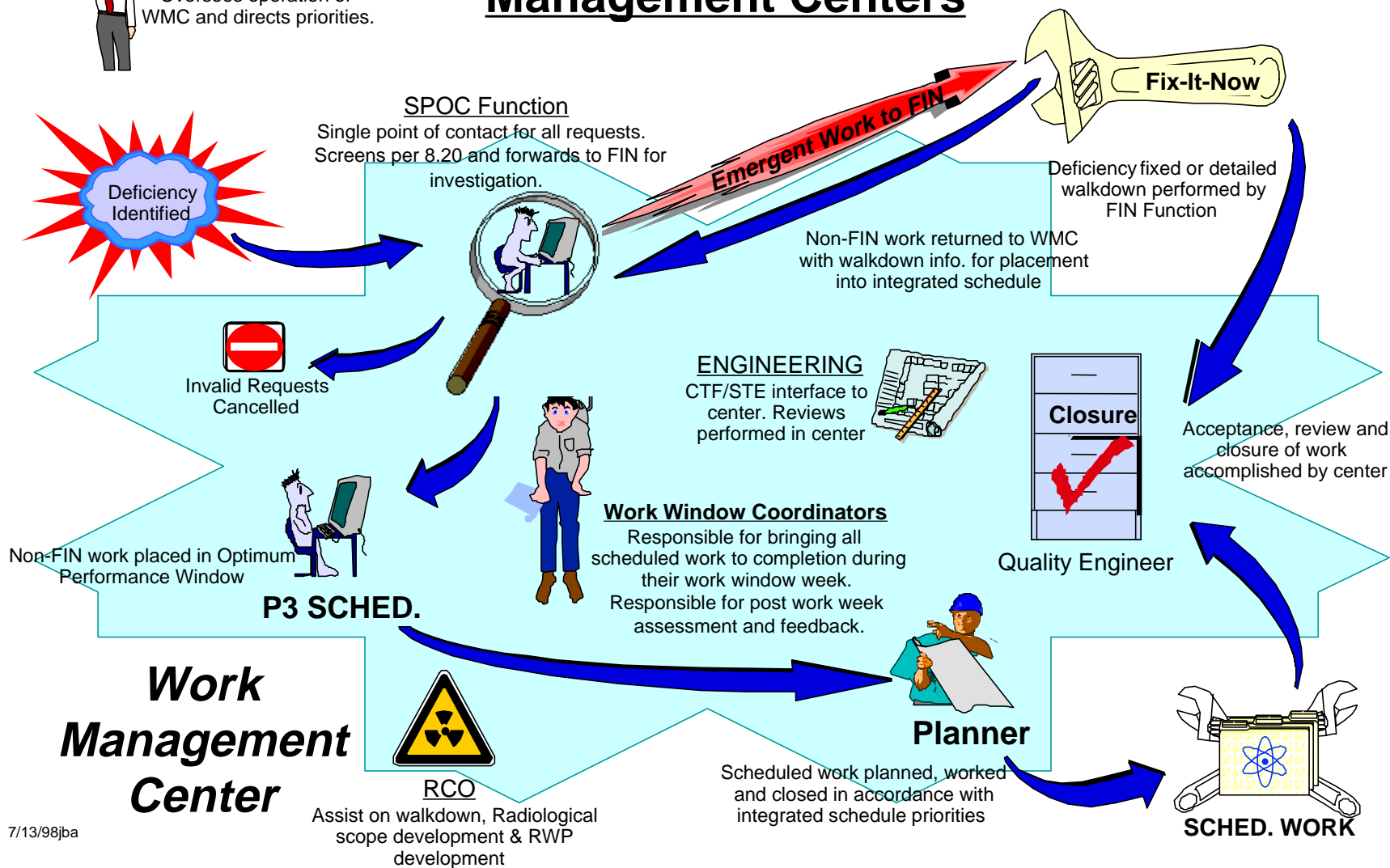
4. Develop Performance Measures, Feedback and Accountability Tools/Processes

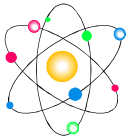
- Determine effectiveness of reengineered process and guide continuous improvement.
- Develop consistent/user friendly analysis and trending capabilities.
- Monitor/manage backlogs, work status, workflow, productivity, and schedule effectiveness.
- Establish process for ongoing evaluation of work performance of facilities, work centers & crews.
- Senior management involved in setting standards and accountability for improvement across all departments.



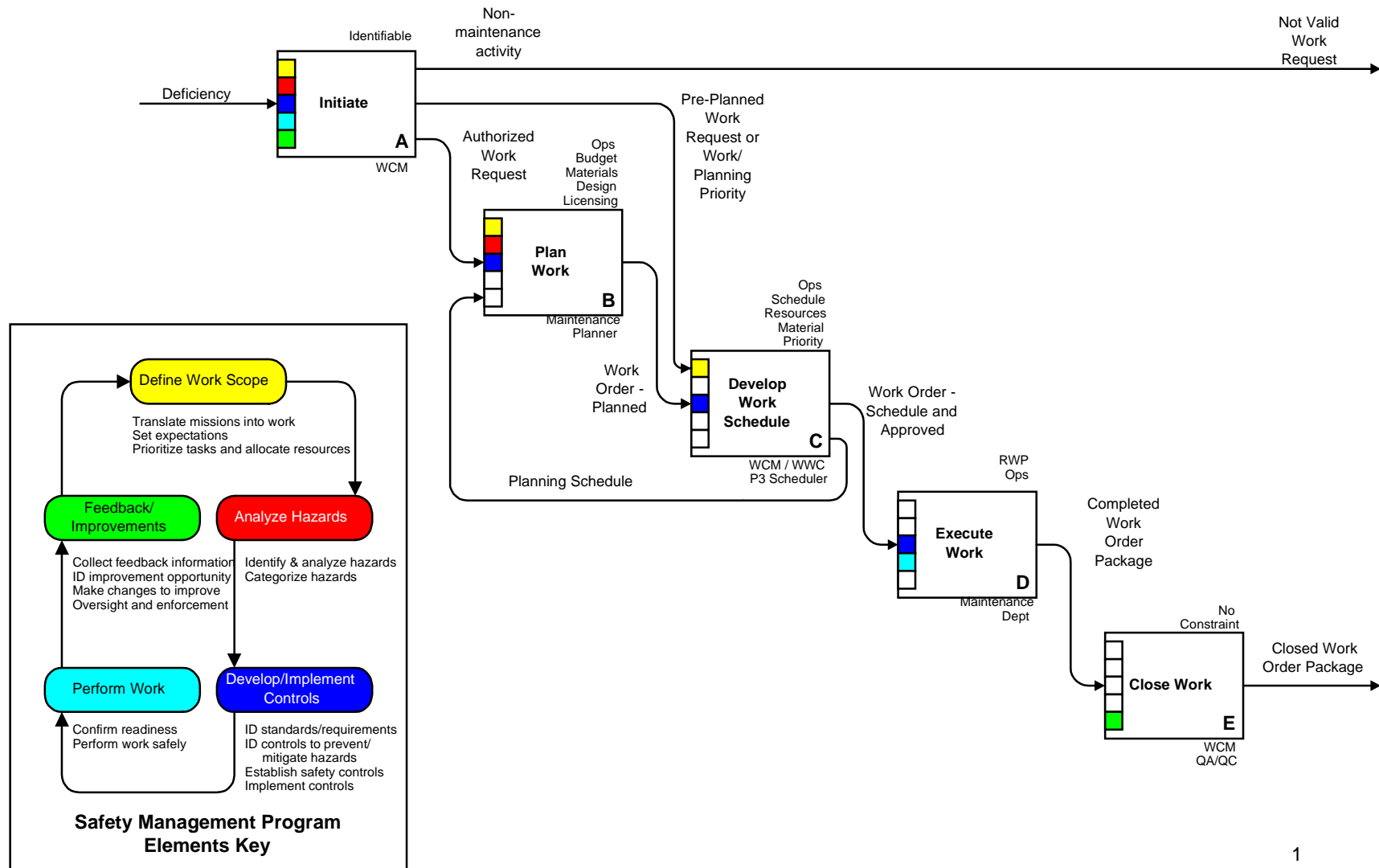
WMC MANAGER
Oversees operation of
WMC and directs priorities.

NMS&S Work Management Centers

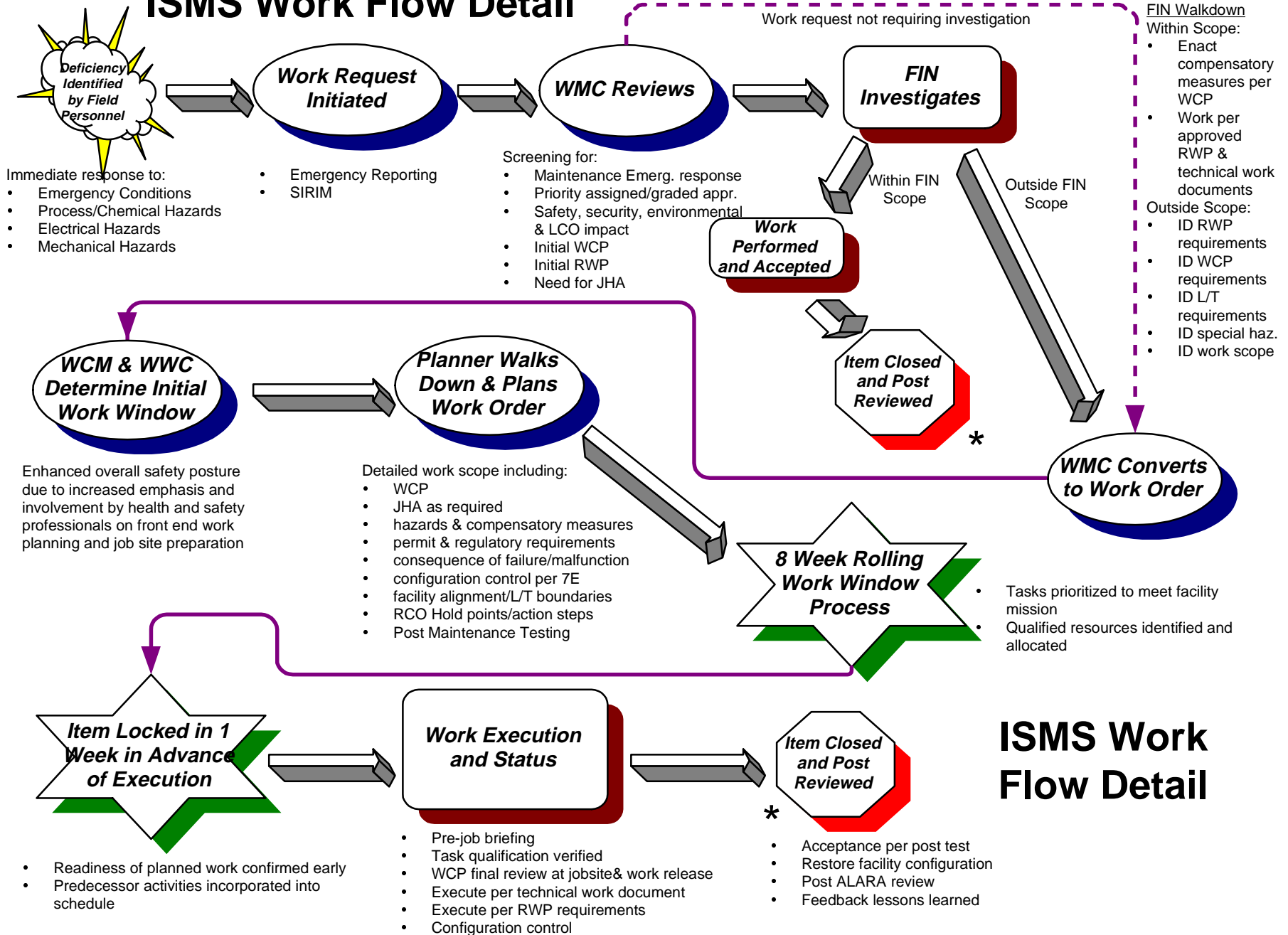




NMS&S Application of Integrated Safety Management Program Elements

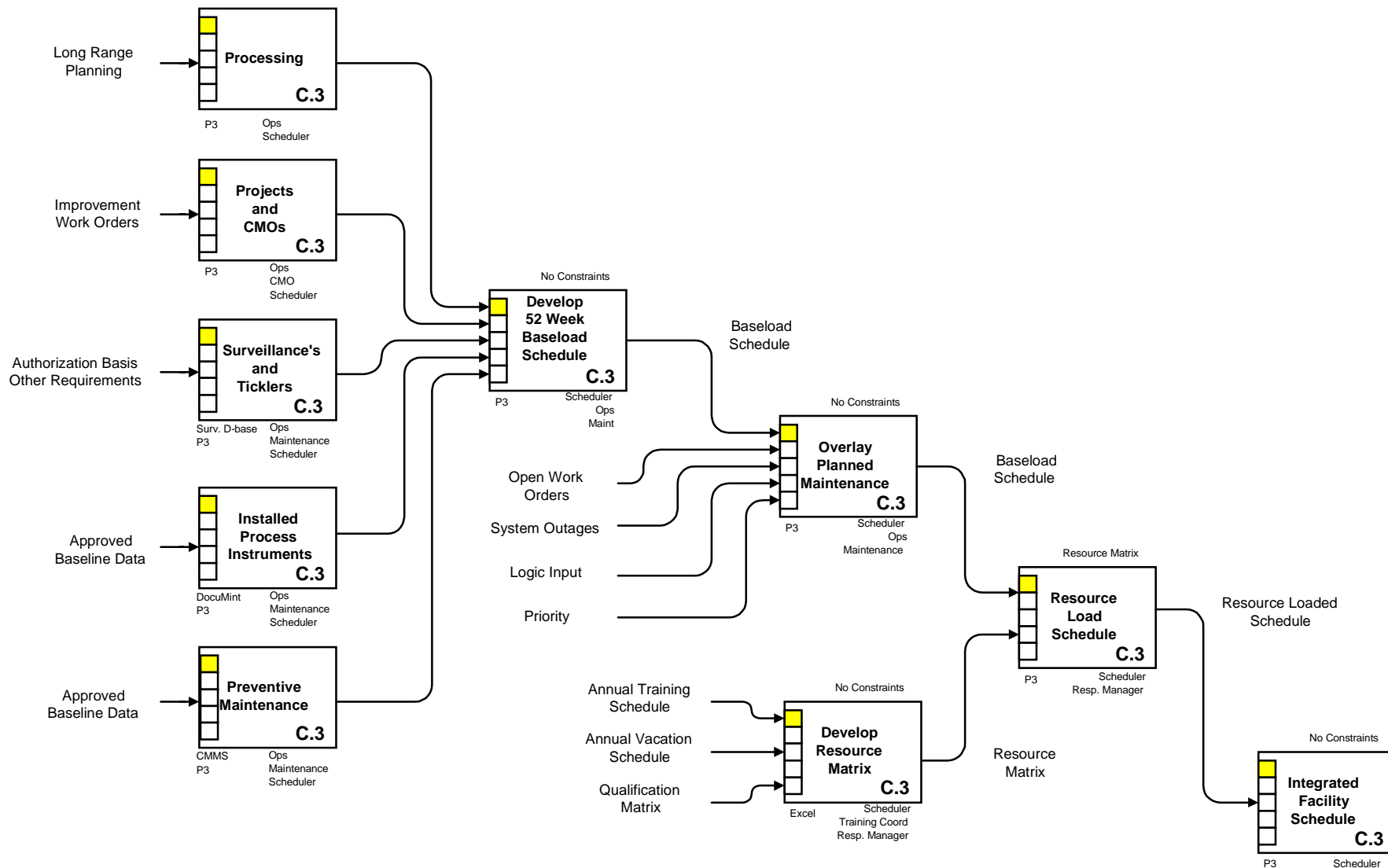


ISMS Work Flow Detail

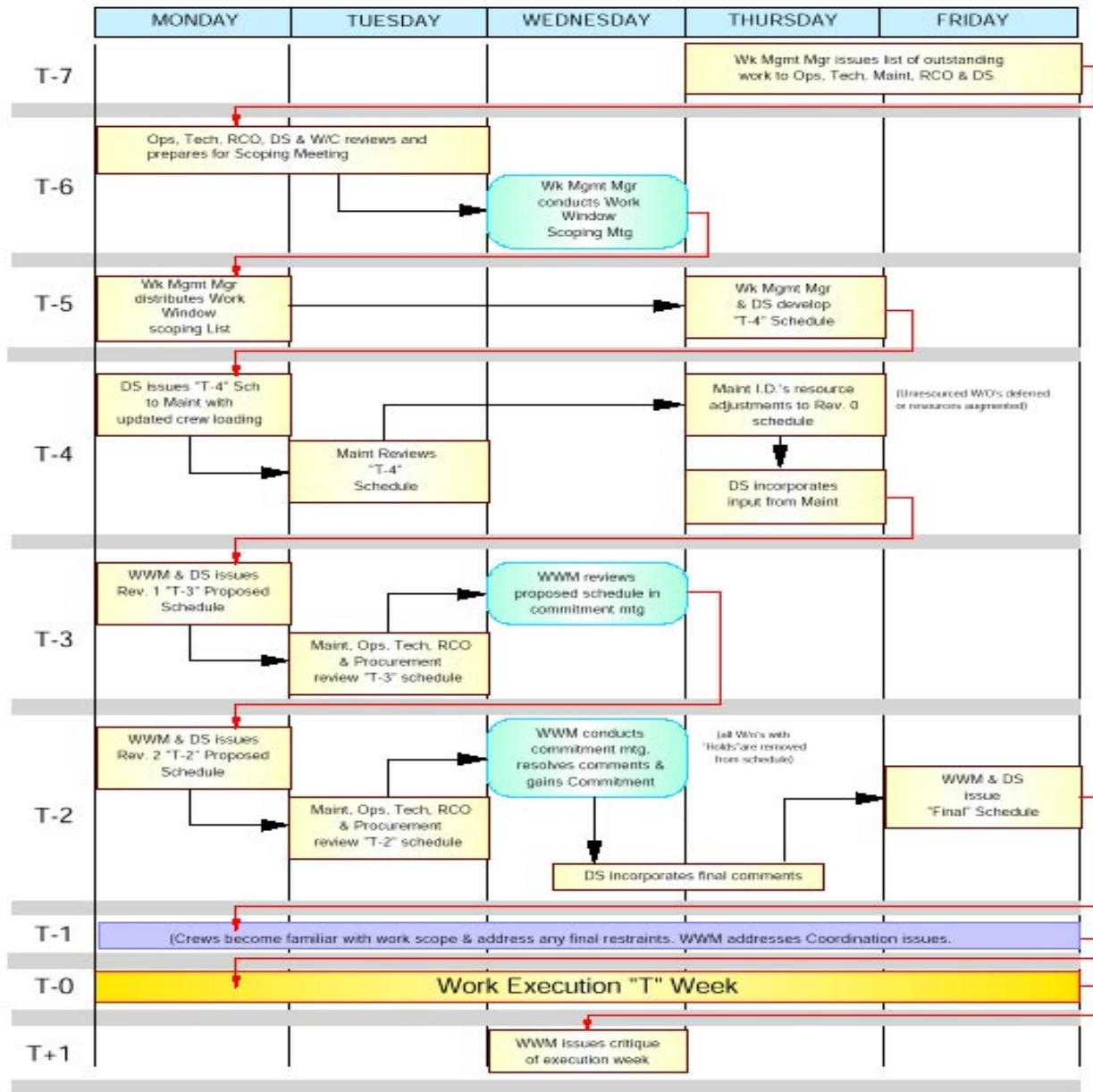


ISMS Work Flow Detail

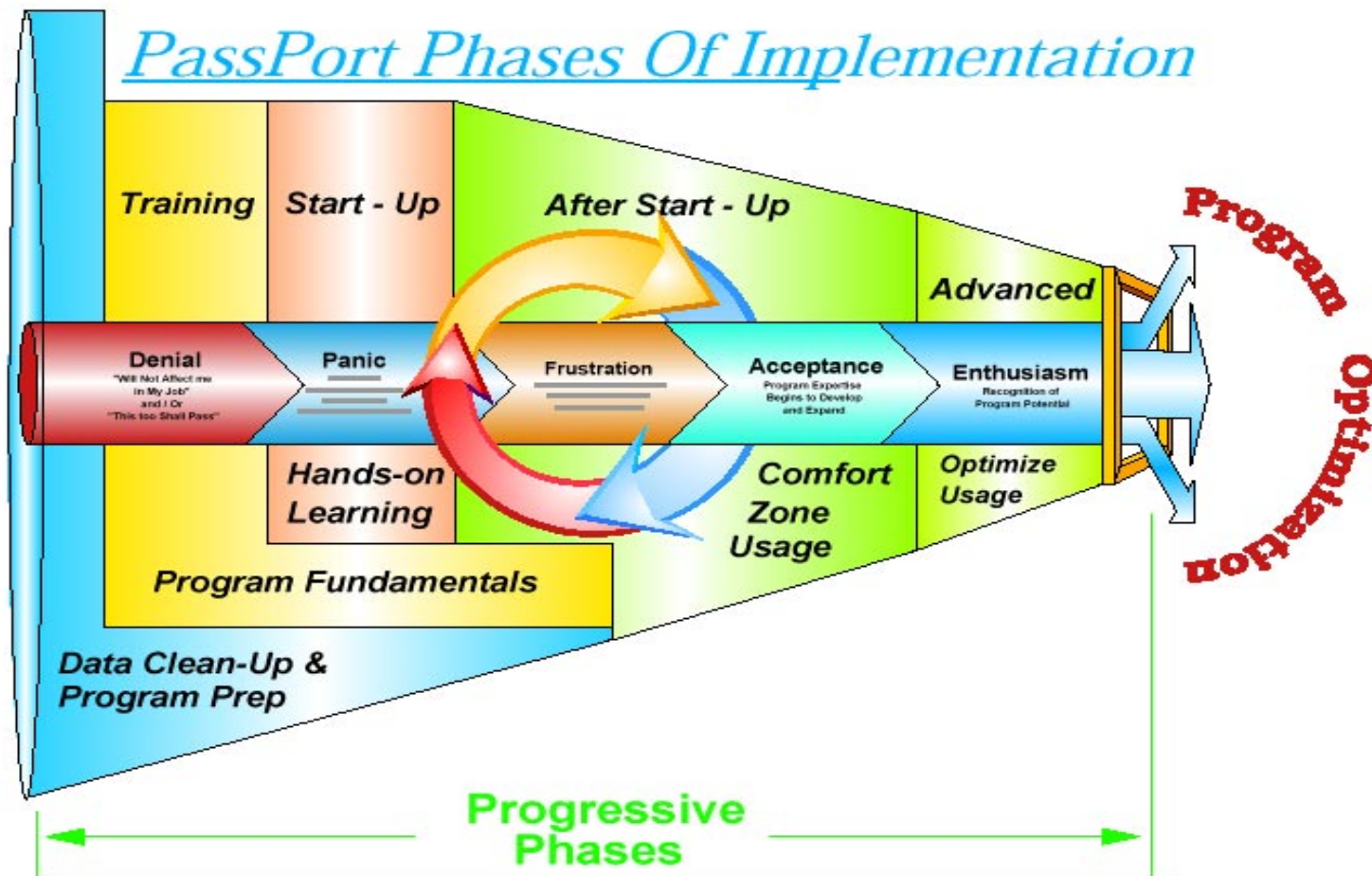
NMS&S Application of Integrated Safety Management Program Elements



SRS - Eight (8) Week Rolling Work Window



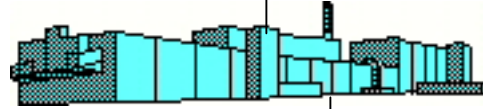
Work Process Improvements (Passport Implementation)



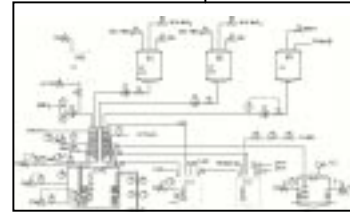
Passport Data Hierarchy



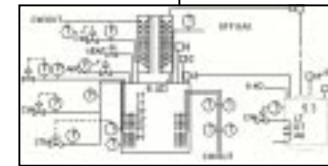
Facility
(FCA)



Unit
(221000)

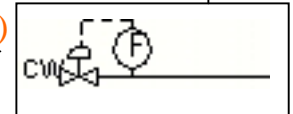


System
(DIM)



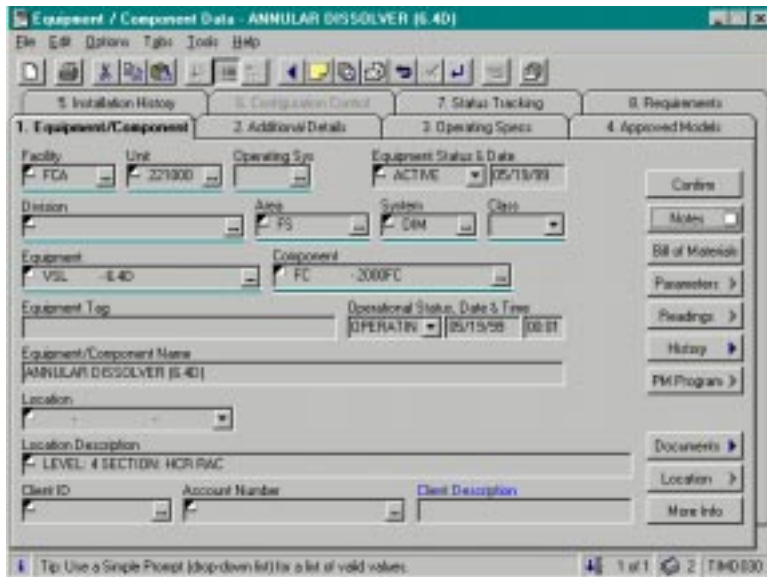
Equipment Type
(VSL)

Equipment Number
(6.4D)



Component
(FC)

Component Number
(2000FC)



The screenshot shows a software window titled "Equipment / Component Data - ANNULAR DISSOLVER (6.4D)". It contains several tabs: "1. Equipment/Component", "2. Additional Details", "3. Operating Specs", and "4. Approved Models". The "1. Equipment/Component" tab is active, showing fields for Facility (FCA), Unit (221000), Operating Sys (FS), Equipment Status & Date (ACTIVE, 25/10/99), Equipment (VSL, 6.4D), Component (FC, 2000FC), Equipment Tag, Operational Status, Date & Time (OPERATING, 25/10/99, 08:01), Equipment/Component Name (ANNULAR DISSOLVER (6.4D)), Location, Location Description (LEVEL: 4 SECTION: HOR PAC), Client ID, Account Number, and Client Description. There are also buttons for Confirm, Notes, Bill of Materials, Parameters, Readings, History, PM Programs, Documents, Location, and More Info.

FCA-221000-FS-DIM-VSL-6.4D-FC-2000FC

Monitoring and Feedback Tools



A screenshot of a Windows-style application window titled "Passport Report Utility". The window has a blue title bar with standard minimize, maximize, and close buttons on the right. The main area has a teal background and contains various input fields and buttons.

Division: ☒ HMSS ☐ HLWM ☐ FDD ☐ ER ☐ TSD ☐ SFSD ☐ AID ☐ DP ☐ SW ☐ ALL

Facility:

Work Order Creation Dates		Work Order Schedule Dates		Work Order Due Dates	
Start	Finish	Start	None	Finish	
<input type="text" value="//"/>	<input type="text" value="//"/>	<input type="text" value="//"/>	<input type="text" value="None"/>	<input type="text" value="//"/>	<input type="text" value="//"/>

Task Field Completion Dates		Work Order Completion Dates		PM Due Dates	
Start	Finish	Start	Finish	Start	Finish
<input type="text" value="//"/>	<input type="text" value="//"/>	<input type="text" value="//"/>	<input type="text" value="//"/>	<input type="text" value="//"/>	<input type="text" value="//"/>

PM Delinquent Dates		PM Deferral Dates		PM Expected Completion Dates	
Start	Finish	Start	Finish	Start	Finish
<input type="text" value="//"/>	<input type="text" value="//"/>	<input type="text" value="//"/>	<input type="text" value="//"/>	<input type="text" value="//"/>	<input type="text" value="//"/>

Work Grp: **WO Type:** **Job Type:** **WO Status:** **Task Status:** **Hold Code:** **Priority:** **Class:**

Monitoring and Feedback Tools (Continued)



NMS&S Passport Statistics

FBL

Data Date: 11/08/2000

NMISS

Maintenance Performance Indicators

Periodic Work Performance Summary

Open Work/Backlog Summary

WORK ORDER STATUS

Work Type	Plan	H/Appr	Active	HOG	Await/C	H/Cmpl	Total Open	Comp/Closed	Comp Mhrs-Est	Comp Mhrs-Act	Ave Mhrs/Allo
PM	99	9	282	3	3	15	411	1,445	29,261	17,140	11.9
Non-PM	55	19	149	1	3	12	239	1,091	22,630	17,194	15.8
Est Mhrs PM	2,008	222	6,050				8,699				
Est Mhrs #PM	7,212	1,078	30,244				44,597				

FIN WORK STATUS

Work Type	Work Requests			Work Orders				Total Open	Comp/Closed	Comp Mhrs-Est	Comp Mhrs-Act	Ave Mhrs/Allo
	Orig	H/Appr	Approved	Active	HOG	Await/C	H/Cmpl					
Work Requests	20	3	23					46				
UP Wlkr Ordrs				92	0	4	1	97	746	8,191	6,490	8.7
FI Wlkr Ordrs				2	0	0	0	2	8	73	125	15.6
Total	20	3	23	94	0	4	1	145	754	8,264	6,615	8.8

Non-PM = 'CO', 'CA', 'SU', 'ST'

IPM = 'Non-PM'

Print Exit

Monitoring and Feedback Tools (Continued)



NMISS Passport Statistics

FBL

Start of Period: 10/30/2000 End of Period: 11/05/2000

NMISS
Maintenance Performance Indicators

Periodic Work Performance Summary							Open Work/Backlog Summary						
SCHEDULE PERFORMANCE													
	WO Sch To Work	WO Sch To Compl	WO Compl	WO #Compl	Tsk Sch To Work	Tsk Sch To Finish	Tasks Finished	Tasks #Finished	Act Sch To Work	Act Sch To Finish	Activities Finished	Activities #Finished	
Scheduled	44	28	18	10	45	29	21	8	106	56	33	23	
Re-Schedule	9	6	0	6	9	6	0	6	26	23	0	23	
Add-On/Emer	10	8	2	6	11	10	3	7	39	28	28	0	
Schedule Effectiveness:							52.50%			34.74%			

FIN PERFORMANCE												
Unscheduled Work	Open Period Start	New WVR this Period	Conv to 'FIN' WVO	Conv to Non 'FIN' WVO	Cancel	Created w/o WVR	Complete this Period	Open Period End	Comp Mhrs-Est	Comp Mhrs-Act	Ave Mhrs/WO	
Work Requests	47	40			1			50				
Non-'FIN' Work Orders				13								
UP Work Orders	109		23		4	0	32	96	309	241	7.5	
FI Work Orders	2		0		0	0	0	2	0	0	0.0	
Total	158	40		13	5	0	32	148	309	241	7.5	
FIN Effectiveness:			125.0%		FIN Backlog Rate:			-6.3%				

Print Exit

Total = (Open Period Start) + (New WVR this Period) - (Conv to Non-UP WVO) - (Cancel) + (Created UP w/o WVR) - (Closed this Period)

Monitoring and Feedback Tools (Continued)

Report Designer - report2ts.frx - Page 1 - SRS Nuclear Materials Stabilization and Storage Division Work Control

Print Preview

Date: 11/08/2000
Time: 11:36:26

NMS&S PASSPORT REPORT

FBL ADD ON OR EMERGENT WORK ORDER TASKS SCHEDULED TO WORK

Item#	WG#	Fac	WO#	WO Stat	TSK#	TSK Status	Pri	Title	Start Date	Finish Date	Field Comp	WO Comp	WO Type
1.	1213	FBL112913		ACTIVE	05	APPROVED	3A	REVISION TASK 1	10/30/00	10/30/00	///	///	CO
2.	3225	FBL129301		ACTIVE	01	WORKING	3B	GSN, 3225, REPAIR 5TH LEVEL FIU IN FB-LINE	10/30/00	10/30/00	///	///	CO
3.	3225	FBL129301		ACTIVE	02	WORKING	3B	GSN, 3225, REPAIR 5TH LEVEL FIU IN FB-LINE	10/30/00	10/30/00	///	///	CO
4.	1820	FBL132873			01			COMPL FIELD WORK - RSU-04: E1 EXHAUST DUCT	11/01/00	11/15/00	///	///	CO
5.	1213	FBL173583			01			GSN,1214,SEMI ANNUAL CHANGE SUPPLY FAN S4	11/02/00	11/02/00	11/02/00	11/06/00	PM
6.	1232	FBL176736		ACTIVE	01	WORKING	3B	REPLACE VALVE 1002 AT V-6A SCRUBBER	11/04/00	11/04/00	///	///	CO
7.	1232	FBL176804		ACTIVE	01	WORKING	3B	GSN, 1213, REPLACE VALVE 1003 AT V-6B SCRUBBER	11/04/00	11/04/00	///	///	CO
8.	1253	FBL197832		COMPLET	01	COMPLETE	3A	REPAIR LEAK @ VLV F0206	11/02/00	11/02/00	11/02/00	11/03/00	UP
9.	4611	FBL198226			01			SSY, 4611, SAMPLE THE 292-2F D/G FUEL OIL FOR QU	10/31/00	10/31/00	///	///	CO
10.	4611	FBL198228			01			GSY, 4611, SAMPLE 235-F D/G FUEL OIL FOR QUALITY	10/31/00	10/31/00	///	///	CO
11.	7234	FBL198256		COMPLET	01	COMPLETE	3A	DOP TEST PORTABLE MAC 21'S	11/01/00	11/01/00	11/01/00	11/03/00	UP

Monitoring and Feedback Tools (Continued)



(Total Open Work Period End - Total Backlog Period Start)/(Total Backlog Period Start)*100 = (-10/158)*100 = -6.30%
PRESS ANY KEY TO CONTINUE

NMS&S Passport Statistics

FBL

Start of Period: 10/30/2000 End of Period: 11/05/2000

NMSS

Maintenance Performance Indicators

Periodic Work Performance Summary								Open Work/Backlog Summary					
SCHEDULE PERFORMANCE													
	vWO Sch To Work	vWO Sch To Compl	vWO Compl	vWO #Compl	Tsk Sch To Work	Tsk Sch To Finish	Tasks Finished	Tasks #Finished	Act Sch To Work	Act Sch To Finish	Activities Finished	Activities #Finished	
Scheduled	44	28	18	10	45	29	21	8	106	56	33	23	
Re-Schedule	9	6	0	6	9	6	0	6	26	23	0	23	
Add-On/Emer	10	8	2	6	11	10	3	7	39	28	28	0	
Schedule Effectiveness:								52.50%		34.74%			

FIN PERFORMANCE											
Unscheduled Work	Open Period Start	New WVR this Period	Conv to 'FIN' WVO	Conv to Non 'FIN' WVO	Cancel	Created w/o WVR	Complete this Period	Open Period End	Comp Mhrs-Est	Comp Mhrs-Act	Ave Mhrs/Wo
Work Requests	47	40			1			50			
Non-'FIN' Work Orders				13							
UP Work Orders	109		23		4	0	32	96	309	241	7.5
FI Work Orders	2		0		0	0	0	2	0	0	0.0
Total	158	40		13	5	0	32	148	309	241	7.5
FIN Effectiveness:			125.0%		FIN Backlog Rate:			-6.3%			

Print Exit

Total = (Open Period Start) + (New WVR this Period) - (Conv to Non-UP WVO) - (Cancel) + (Created UP w/o WVR) - (Closed this Period)

Monitoring and Feedback Tools (Continued)



A screenshot of the "NMS&S Passport Report Utility" window. The main window has a teal background and contains several input fields and buttons. A yellow dialog box titled "NMS&S" is open in the center, prompting the user to "Enter a Condition Tag Number" and "Condition Tag Location Contains:". The dialog box also includes a "System Designator" dropdown menu (currently showing "ALL"), a "Facility/Building" dropdown menu (currently showing "ALL"), and a "Report Scope" dropdown menu (currently showing "Active Tags"). The "Run" and "Cancel" buttons are visible at the bottom of the dialog box. The background window shows various input fields for "Work Order", "Task Field", "PM Delin", "Work Grp", and "WO", along with buttons for "PI(%S)", "PI", "History", "Find", "TL", "REPORT", "EXIT", "UPDATE", and "Reset".

NMS&S Passport Report Utility

Facility
☐ FD-Line ☐ HD-Line ☐ F Canyon ☒ H Canyon ☐ ALL

Work Order Creation Dates: / / Start Finish
Task Field Co: / / Start Finish
PM Delin: / / Start Finish
Work Order Schedule Dates: / / Start Finish
Work Order Due Dates: / / Start Finish
Completion Dates: / / Start Finish
Priority: Class:

Work Grp: ALL WO: ALL

PI(%S) PI History Find TL REPORT EXIT UPDATE Reset

NMS&S

Enter a Condition Tag Number:
(Enter '0' to Select ALL Tags)

Condition Tag Location Contains:
(Leave Blank to Select ALL Locations)

System Designator: ALL
Facility/Building: ALL
Report Scope: Active Tags

Run Cancel

Monitoring and Feedback Tools (Continued)

Report Designer - report11.frx - Page 1 - SRS Nuclear Materials Stabilization and Storage Division Work Control

Print Preview

NMS&S PASSPORT REPORT
HCA CONDITION TAGS

Item#	TAG#	Fac	Bldg	Sys	Equipment Name	TAG Location	Work Request Title
1	95102219	HCA	221000	MST	MPS	WGVC SECT.12	GSN,1221, FAB /INSTALL 1 (W/C-12-B) BRANCH HEADER
2	95102232	HCA	221000	GVC	UV	HGVC SECT.15	GSN,1221,H15C5 HOUSEKEEP GREASE BUILDUP
3	95105464	HCA	221000	GVC	UV	HGVC SECT.4	GSN,1221,REPLACE H4D5 STEAM BELLOWS STUCK IN UP
4	95106091	HCA	221000	GVC	UV	HGVC SECT.17	GSN,1221,REPAIR H17B4 NOZ.98 VENT & AIR BELLOWS
5	95106294	HCA	221000	MST	LPS	ROOM 185A	GSN,1221,TIGHTEN 000514 VALVE STEM PACKING
6	95106300	HCA	221000	MST	MPS	WGVC SECT.18	GSN,1221,FAB 18WG-101 TRAP PIPING LEAK
7	95106329	HCA	221000	GVC	UV	WGVC SECT.14	GSN,1221,REPAIR W14A4 NOZ.117 STEAM GLOBE LEAK
8	95106334	HCA	221000	HEAD	EVP	2ND LEVEL,SECTION 11	GSN,1221,REPAIR 11.3 A BONNET LEAK
9	95106339	HCA	221000	MST	MPS	2ND,SECT.18	GSN,1221F,REPAIR 150# HEADER TRAP SECT.18,2ND LEVEL
10	95106342	HCA	221000	GVC	UV	HGVC SECT.10	GSN,1221,REPAIR H10D4 NOZ. 117 STEAM GLOBE LEAK
11	95106345	HCA	221000	GVC	UV	WGVC SECT.18	GSN,1221,REPAIR W18C4 NOZ.98 STEAM GLOBE LEAK
12	00-9510453	HCA	221000	HMSP			3231, SSIY, TROUBLESHOOT 17.8E COIL PRESSURE
13	00-9510466	HCA	221000	HEAD			GSN,3231, REPAIR 10.2 SP GR INSTRUMENTATION
14	0009510212	HCA	221000	NWC			GSN, 1221, REPAIR 30 TON HOIST, NWC
15	0009510212	HCA	221000	NWC			GSN, 1221, REPAIR 30 TON HOIST, NWC
16	95006621	HCA	221000	HMFC	TK		GSN,3231,ADJUST / REPAIR 12.2 BACKPRESSURE
17	95006745	HCA	211000	BLDG	WLL	BLDG SH2	GS, FIN, BLDG SH2 (CHANGE OUT BLDG) - REPAIR FLOOR
18	95025929	HCA	292000	HVAC		S END OF 292-H	GS, 1222, REPLACE THERMOSTAT FOR 292-H SOUTH
19	95031087	HCA	221000	MST	UV	HGVC SECTION 13	GSN,1221,H-12-B-3-2 CROSSOVER ,FAB AND INSTALL
20	95031351	HCA	291000			HCMA	1252, T/S AND REPAIR 291H STACK A/C UNIT

Monitoring and Feedback Tools (Continued)

Report Designer - report11.frx - Page 1 - SRS Nuclear Materials Stabilization and Storage Division Work Control									
NMS&S PASSPORT REPORT									
HCA CONDITION TAGS									
Date: 11/08/2000									
Time: 12:18:01									
t Name	TAG Location	Work Request Title	Tag				Task	Status	Date Entered
			Pri	Rem?	FC	Number			
	WGVC SECT.12	GSN,1221, FAB /INS TALL 1 (W C-12-B) BRANCH HEADER	3A	N		GSN00166869	01	ACTIVE	07/10/00
	HGVC SECT.15	GSN,1221,H16C5 HOUSEKEEP GREASE BUILDUP		N		GSN00179703	01	COMPLETE	07/31/00
	HGVC SECT.4	GSN,1221,REPLACE H4D5 STEAM BELLOW'S STUCK IN UP	5A	N		GSN00194626	01	ACTIVE	10/11/00
	HGVC SECT.17	GSN,1221,REPAIR H17B4 NOZ.9% VENT & AIR BELLOW'S		N		GSN00194209	01	ACTIVE	10/12/00
	ROOM 185A	GSN,1221,TIGHTEN 000514 VALVE STEM PACKING	5A	N		GS 00195980	01	ACTIVE	10/19/00
	WGVC SECT.18	GSN,1221,FAB 18WG-101 TRAP PIPING LEAK	5A	N		GSN00182879	01	ACTIVE	09/05/00
	WGVC SECT.14	GSN,1221,REPAIR W14A4 NOZ.117 STEAM GLOBE LEAK	5A	N		GSN00195992	01	ACTIVE	10/13/00
	2ND LEVEL,SECTION 11	GSN,1221,REPAIR 11.3 A BONNET LEAK	5A	N		GSN00199138	01	ACTIVE	10/31/00
	2ND,SECT.18	GSN,1221F,REPAIR 150# HEADER TRAP SECT.18,2ND LEVEL	5A	N		GSN00196746	01	ACTIVE	10/13/00
	HGVC SECT.10	GSN,1221,REPAIR H10D4 NOZ. 117 STEAM GLOBE LEAK	5A	N		GSN00195225	01	ACTIVE	10/13/00
	WGVC SECT.18	GSN,1221,REPAIR W18C4 NOZ.9% STEAM GLOBE LEAK	5A	N		GSN00195988	01	ACTIVE	10/13/00
		3231, SSIY, TROUBLESHOOT 17.8E COIL PRESSURE	3B	N		00036901	WR	CANCEL	02/04/00
		GSIN,3231, REPAIR 10.2 SP GR INSTRUMENTATION	3B	N		00039737	WR	CANCEL	02/25/00
		GSN, 1221, REPAIR 30 TON HOIST, NWC		N		00035236	WR	CANCEL	01/24/00
		GSN, 1221, REPAIR 30 TON HOIST, NWC	3A	N		00035235	WR	CANCEL	01/24/00
		GSN,3231,ADJUST / REPAIR 12.2 BACKPRESSURE	3B	N		GSN00193035	01	COMPLETE	10/10/00
	BLDG SH2	GS, FIN, BLDG SH2 (CHANGE OUT BLDG) - REPAIR FLOOR	4	N		GS 00143755	01	ACTIVE	03/16/00
	S END OF 292-H	GS, 1222, REPLACE THERMOSTAT FOR 292-H SOUTH	3A	N		00025353	WR	CANCEL	10/28/99
	HGVC SECTION 13	GSN,1221,H-12-B-3-2 CROSSOVER ,FAB AND INSTALL	5A	N		GSN00088597	01	CANCEL	10/28/99
	HCMA	1252, T/S AND REPAIR 291H STACK A/C UNIT	3B	N		00014842	WR	CANCEL	08/06/99

Monitoring and Feedback Tools (Continued)



A screenshot of a "Search" dialog box. The dialog has a title bar with a magnifying glass icon and the word "Search". It contains four search criteria sections, each with a "Field:" dropdown, an "Operator:" dropdown, and a "Value:" text input. The first section has "Title" selected for the field and "equals" for the operator. The second section has "Equipment Type" selected. The third section has "Equipment Number" selected. The fourth section has "Component Type" selected. Between each section are radio buttons for "And" and "Or". At the bottom, there is a "Case Sensitive" checkbox and three buttons: "Search", "All", and "Cancel".

Field:	Operator:	Value:
Title	equals	
Equipment Type	equals	
Equipment Number	equals	
Component Type	equals	

☐ And ☐ Or

☐ Case Sensitive

Search All Cancel

Monitoring and Feedback Tools (Continued)



A screenshot of a "Search" dialog box. The dialog has a title bar with a magnifying glass icon and the word "Search". It contains several search criteria rows, each with a "Field:" dropdown, an "Operator:" dropdown, and a "Value:" text input. The "Operator:" dropdown for the first row is open, showing a list of operators: "equals", "not equals", "greater than", "less than", "is blank", "is NULL", and "contains". The "is NULL" option is currently selected. Between the rows are "And" and "Or" radio buttons. At the bottom, there is a "Case Sensitive" checkbox and three buttons: "Search", "All", and "Cancel".

Field:	Operator:	Value:
Title	equals	
Unit		
System		
Equipment Type	equals	
Equipment Number	equals	
Component Type	equals	

☐ And ☐ Or

☐ Case Sensitive

Search All Cancel

Monitoring and Feedback Tools (Continued)

SRS Nuclear Materials Stabilization and Storage Division Work Control

Print Preview

NMS&S PASSPORT REPORT
HCA WORK ORDER TASKS

WO#	Fac	WO#	Stat	TSK#	Status	Pri	Title	Sched Date	Due Date	PM Exp Compl	PM Delin	PM Defe
1.	3232	HCA 00043740	CLOSED	01	CLOSED	3A	GSN, 3232, TROUBLESHOOT & REPAIR THE OLD WARM CRANE	//	//	//	//	/
CLI # HCA221000OW CDRIV001												
History: E & I replaced the oil dashpot relay on the old warm crane bridge drive system. Ordered dashpot off GHCSM0001. Cap. 55 item 27800.00. performed PMT by running crane North and South in all speeds.												
Comments: replaced oil dashpot relay on the												
2.	1211	HCA 00043745	CLOSED	01	CLOSED	4	GSN, 1221, IDENTIFY AND REPAIR STEAM LEAK @ W-16-B BANK	//	//	//	//	/
3.	3247	HCA 00043745	CLOSED	02	CLOSED	4	GSN, 1221, IDENTIFY AND REPAIR STEAM LEAK @ W-16-B BANK	//	//	//	//	/
CLI # HCA221000MSTMP SHDR16BVM C-16B1												
History: Removed insulation to locate leak. Leak is on flange at header and spool piece at W-16-B-5 bank. Flange needs to be regasketed. Regasketed flange at position 5 on w- 16-b bank.												
Comments: Removed insulation to locate leak header and spool piece at W-16-B-5 to be regasketed.												
4.	1221	HCA 00043745	CLOSED	03	CLOSED	4	PACKING AND GASKET MATERIAL (ASBESTOS & NON-ASBESTOS)	//	//	//	//	/
5.	1221	HCA 00043745	CLOSED	04	CLOSED	4	PACKING AND GASKET MATERIAL (ASBESTOS & NON-ASBESTOS)	//	//	//	//	/
6.	1221	HCA 00043766	CANCEL	01	CANCELED	4	NCLI, 1222, ADJUST FLOW-EYEWASH STATION@ 905/906	//	//	//	//	/
7.	1222	HCA 00043828	CLOSED	01	CLOSED	4	GSN, 1222, ADJUST FLOW-EYEWASH STATION@ 905/906 SAMPLERS	//	//	//	//	/

Monitoring and Feedback Tools (Continued)



A screenshot of the "NMS&S" application window. The window has a blue title bar with the text "NMS&S" and standard window controls. The main area is divided into several sections:

- Facility:** HCA
- Work Order:** 00046022
- Task:** 01
- Work Group:** 1252
- Found Set:** Record 30 of 1241
- Title:** , GSIN, WG1252, REPAIR THE TRANE CHILL WATER PUMP
- History:** A text area containing a detailed log of the repair work, including voltage checks, fuse replacements, and pump status updates. The log ends with the date and initials "7/12/99 KGF, WMH, JM, FAE".
- Comments:** A text area containing a summary comment: "trane chiller pump operating properly. the power was out to pump due to the trane chiller compressor #2 shorted to ground. replaced fuses in mcc , started pump."
- CLI #:** HCA221000CHWCHU03MO01
- Navigation:** A set of buttons at the bottom for navigating between records, including "Find" and "Exit".

Monitoring and Feedback Tools (Continued)



NMSSS Scheduled Work Order Tasks

Date: 11/08/2000

NMSSS

Percent Scheduled Work Order Tasks Maintenance Performance Indicators

	JANUARY			FEBRUARY			MARCH			APRIL		
	Open	Sched	Pct	Open	Sched	Pct	Open	Sched	Pct	Open	Sched	Pct
FB-Line	1120	802	71.6	1136	813	71.6	1157	833	72.0	1185	853	72.0
F Canyon	1720	1371	79.7	1748	1394	79.7	1755	1399	79.7	1766	1449	82.0
HB-Line	860	644	74.9	893	671	75.1	915	690	75.4	944	728	77.1
H Canyon	2006	1760	88.7	2025	1801	88.9	2098	1873	89.3	2149	1928	89.7

	MAY			JUNE			JULY			AUGUST		
	Open	Sched	Pct	Open	Sched	Pct	Open	Sched	Pct	Open	Sched	Pct
FB-Line	1212	876	72.3	1230	896	72.8	1214	884	72.8	1025	704	68.7
F Canyon	1812	1446	79.8	1791	1443	80.6	1766	1408	79.7	1620	1252	77.3
HB-Line	968	737	76.1	981	756	77.1	964	755	78.3	779	641	82.3
H Canyon	2332	2099	90.0	2374	2132	89.8	2437	2212	90.8	2099	1984	94.5

	SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER		
	Open	Sched	Pct	Open	Sched	Pct	Open	Sched	Pct	Open	Sched	Pct
FB-Line	916	595	65.0	766	474	61.9	754	453	60.1	0	0	0.0
F Canyon	1500	1148	76.5	1396	995	71.3	1387	961	69.3	0	0	0.0
HB-Line	641	516	80.5	529	397	75.0	493	352	71.4	0	0	0.0
H Canyon	1867	1782	95.4	1626	1562	96.1	1590	1515	95.3	0	0	0.0

Print Refresh Exit

Post Work Week Assessments (Feedback & Continuous Improvement)

- Facility Management involved.
- All organizations that affected schedule and planning success/failure attend the assessment review.
- Problems and lessons learned during the work week are identified and discussed.
- Corrective Action items are tracked and resolutions verified.

Effectiveness

- Increased division management involvement in work process improvements (with consistent focus).
- Increased worker involvement in work scope development and task readiness.
- Improved schedule effectiveness and schedule accountability.
- Improved management of emergent/add-on work.
- Improved management of open work/backlog.

Effectiveness

- Planners given adequate time to plan work packages to support the 8 week rolling schedule process.
- Increased procedure compliance and job function accountability.
- Reduced resources required for reporting, measuring and trending.
- Work process information accessible to anyone who needs the information at anytime (All facilities and divisions report consistently).

Effectiveness

- Improved work planning to the task level - hazards identification/mitigation, appropriate resources (including tools and equipment) and work groups assigned.
- Model work orders being appropriately used for repetitive and complex corrective maintenance.
- Work package quality improving, work delays reduced.
- Evaluated and optimized installed process instrumentation (IPI) (ongoing-reliability based).

Effectiveness

- Improved/optimized PM (ongoing).
- Established/expanded site Radiological Containment Program.
- Improved performance monitoring and trending capabilities.
- Established post work assessment tools/process.
- Reduced risk and exposure to hazardous environments.
- Improved feedback process to drive continuous improvement.

Increased Mechanisms for Feedback and Continuous Improvement

1. Self assessments/evaluation process
2. “Facility Evaluation Board” reviews
3. “Lessons Learned” communications
4. Site Maintenance “Subject Matter Expert” meetings
5. Weekly Maintenance managers meetings
6. “Work Management Center Manager Forums”
7. Electronic work history and comments
8. Post work week assessment meetings & reports
9. Improved performance monitoring tools
10. Increased management oversight, involvement coaching and mentoring
11. Worker feedback & “Work Package Assessments”